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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/729,257

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EXAMINER

MACILWINEN, JOHN MOORE JAIN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/729,257	Applicant(s) YOKOTA ET AL.	
	Examiner John M. MacIwinen	Art Unit 2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,8,10-13,20-25,30,34,35,40,44,45,50 and 54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,10-13,20-25,30,34,35,40,44,45,50 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/29/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/19/2008 have been fully considered. Applicant's arguments regarding the rejections made under 35 USC 101 are persuasive, and thus the rejections made under 35 USC 101 have been withdrawn.

2. Applicant continues by arguing rejections made under 35 USC 103. Applicants argue that RFC 3053 "fails to disclose 'how the user can pick on tunnel broker'". However, on pg. 3 RFC 3053 discloses the user "choos[ing] the 'closest' one, the 'cheapest' one, or any other one" and that the user "connects to register and activate the tunnels". Furthermore, Applicant's arguments ('how the user can pick on tunnel broker') do not correspond to claim language. Applicant's arguments thus are not persuasive.

3. Applicant's continue by arguing that RFC 3053 doesn't show "discovering an IPv6 connect agent using a reverse DNS lookup". Applicant's arguments do not correspond to claim language. Furthermore, In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

4. Applicants next argue, addressing Waddington, that the "tunnel endpoint addresses" are not "the address of the desired IPv6 connect agent"; However, the specific definition Applicant appears to be relying on for an IPv6 connect agent is not

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required by Applicant's claim language. Additionally, in paragraph 21 of Applicant's specification, when describing an IPv6 connect agent, Applicant describes said agent as enabling "an IPv6 enabled node residing in an IPv4 network to engage in IPv6 communications" and goes on to note that "Methods for providing IPv6 communications across an IPv4 or mixed network ... (include) tunneling". Applicant's arguments thus are not persuasive.

5. Applicant continues by arguing that "There is not teaching or suggestion about 'the address of the desired IPv6 connect agent' being transmitted or received". In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. Applicant next argues that "Stephens only discloses general explications of DNS and ARP" and fails to disclose "information exchanged by the DNS server and the IPv6 enabled node facilitate automatic discover and connection". However, Stephens was not relied upon to teach all of this subject matter; the rejection was made under 35 USC 103, RFC 3053 in view of Waddington and Stephens. Applicant's arguments thus are not persuasive.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 - 4, 6, 9 - 17, 19 - 20, and 22 - 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 (IPv6 Tunnel Broker), further in view of Waddington (Realizing the Transition to IPv6), further in view of Stevens (TCP/IP Illustrated, Volume 1: The Protocols).

9. Regarding claims 1, 25, 35 and 45, RFC 3053 shows a method, an IPv6 enabled node, computer readable medium containing instructions, and system with means for an IPv6 enabled node to engage in IPv6 communication across a network containing IPv4 components, the method comprising (Abstract):

receiving information to enable a connection to at least one IPv6 connect agent from a server (pg. 3, section 2)

utilizing the connect agent to engage in IPv6 communications across the network (pg. 3 - 4, section 2).

RFC 3053 does show the connect agent utilizing the IPv6 enabled notes identifying information (pg. 4, section 2.1) but does not explicitly show where the query from the IPv6 enabled node identifies the node,

where at least one name of an IPv6 connect agent is received from a Domain Name System (DNS) server,

transmitting a name of a desired IPv6 connect agent to the DNS server,

receiving an address of the desired IPv6 connect agent from the DNS server.

Waddington shows receiving an IPv6 connect agent address through DNS (pg.

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139, col. 2 and Fig. 2)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 with that of Waddington as both disclosures are directed to implementing IPv6.

RFC 3053 in view of Waddington thus show querying a server in order to engage in IPv6 communication across a network containing IPv4 nodes (Waddington, Fig 2, pg. and RFC 3053 sections 2-2.2) as well as where said information can be obtained through a DNS server (Waddington, pg. 139 col. 2). However, RFC 3053 in view of Waddington do not discuss the specifics of DNS queries and responses; that is, they do not explicitly disclose all of:

- transmitting a query identifying a node to a DNS server,
- receiving at least one name of a connection agent/server to facilitate connections from the DNS server,
- transmitting the name of a desired agent/server to a DNS server
- receiving an address of the desired agent/server from the DNS server
- and using the address.

Stevens shows transmitting a query identifying a node to a DNS server (pg. 2 and 10, showing utilizing TCP/IP, where TCP/IP transmissions inherently identify the querying node)

receiving at least one name of a connection agent/server to facilitate connections from the DNS server (pg. 2, Section 14.1, paragraph 1, showing mapping between “hostnames and IP address”; see also pgs. 13 and 15),

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transmitting the name of a desired agent/server to a DNS server (pgs. 13-15)
receiving an address of the desired agent/server from the DNS server (pgs. 13 - 15)
and using the address (pg. 2, Section 14.1, paragraph 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington with that of Stevens in order to comply with traditional DNS querying methodologies and protocols.

RFC 3053 in view of Waddington and Stephens thus show all of claims 1, 25, 35 and 45.

10. Regarding claim 6, RFC 3053 in view of Waddington and Stevens further show wherein the desired connect agent is the one closest to the IPv6 enabled node (RFC 3053, pg. 3, Section 2).

11. Regarding claim 10, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises an IP address (Stevens, pg. 17).

12. Regarding claim 11, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises a media access control address (Stevens, pgs. 19 – 22).

13. Regarding claim 12, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises a character string (Stevens, pgs. 13 and 15).

14. Regarding claims 13, 30, 40 and 50, RFC 3053 in view of Waddington and Stevens further show a method, a domain name system server (Waddington, pg. 139), and computer readable medium containing instructions, to provide an IPv6 enabled node an address of an IPv6 connect agent, comprising

receiving a query identifying the IPv6 enabled node from the IPv6 enabled node (RFC 3035, Sections 2-2.2, Stephens, pgs. 2 and 10)

transmitting at least one name of one IPv6 connect agent to the IPv6 enabled node (Stephens, pg. 2, 11-12, Waddington, pg. 139)

receiving a name of the desired IPv6 connect agent from the IPv6 enabled node (RFC 3035, Section 2, Stephens pg. 13)

transmitting the address of the IPv6 connect agent to the IPv6 enabled node (RFC 3035, Section 2-2.2, Stephens pg. 2, 13, 17).

15. Regarding claims 20, 34, 44 and 54, RFC 3053 in view of Waddington and Stevens further show searching a record corresponding to the name of the desired IPv6 connect agent from a lookup table; and

finding the address of the desired IPv6 agent from the record (Stevens, pg. 20).

16. Regarding claim 22, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises an Internet Protocol address (Stevens, pgs. 11 and 13).

17. Regarding claim 23, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises a Media Access Control address (Stevens, pgs. 19 - 22).

18. Regarding claim 24, RFC 3053 in view of Waddington and Stevens further show wherein the query comprises a character string (Stevens, pgs. 13 and 15).

19. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 in view of Waddington and Stevens as applied to claim 1 above, and further in view of Coughlin et al. (US 6,810,411 B1), hereafter Coughlin.

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20. Regarding claim 8, RFC 3053 in view of Waddington and Stevens show claim 1.

RFC 3053 in view of Waddington and Stevens do not show where the desired IPv6 connect agent is the one whose name is first received from the DNS server.

Coughlin shows where the desired IPv6 connect agent is the one whose name is first received from the DNS server (Coughlin, col. 10 lines 45 – 67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington and Stevens with that of Coughlin in order to ensure a DNS server was selected, and when possible, the fastest available (i.e., the first to respond) server is selected.

21. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over RFC 3053 in view of Waddington and Stevens as applied to claim 13 above, and further in view of Kang et al. (US 2003/0074461 A1).

22. Regarding claim 21, RFC 3053 in view of Waddington, Stevens show claim 13.

RFC 3053 in view of Waddington, Stevens do not explicitly show using a Naming Authority Pointer Domain Name System resource record.

Kang shows using a Naming Authority Pointer Domain Name System resource record ([8, 22, 31 – 34]).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the disclosure of RFC 3053 in view of Waddington and Stevens with that of Kang in order to use an additional record, compatible with the DNS methodology of the other disclosures, to resolve and lookup hosts (Kang, [8]).

Conclusion

1. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. MacIlwinen whose telephone number is (571) 272-9686. The examiner can normally be reached on M-F 7:30AM - 5:00PM EST; off alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Caldwell/
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